

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

COMMONWEALTH EDISON COMPANY

Proposed general increase in electric)	
rates, general restructuring of rates,)	
price unbundling of bundled service)	No.05-0597
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**INITIAL BRIEF
OF THE UNITED STATES
DEPARTMENT OF ENERGY**

April 25, 2006

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COMES NOW the United States Department of Energy ("DOE") on behalf of its two National laboratories (Argonne National Laboratory ("Argonne") and Fermi National Laboratory ("Fermi") and on behalf of other federal executive agencies, by its counsel and hereby submits its Initial Brief in the above-captioned proceeding pursuant to Section 200.800 Of the Rules of Practice of the Illinois Commerce Commission ("Commission")

III.F.1. Embedded Cost of Service Study

The Company has redesigned its non-residential customer class definitions in this case. It has combined all standard voltage customers with loads above 1,000 kW into one class, whereas these customers are currently divided into four classes. Those four classes currently include all customers with loads at high voltage levels, defined as at or above 69 kV, and these high voltage loads are provided a discount under Rider HVDS. Specifically, Rider HVDS provides that qualifying customers "...shall be allowed a credit per kilowatt *on that portion of the demand* used for billing each month under

Rate RCDS which is served from the line(s) entering the property at 69,000 volts or higher (italics added).” Under the Company’s new class definitions, all high voltage customers are placed into one class and a fixed Distribution Facilities Charge (DFC) of \$2.17 is proposed by the Company to apply to all high voltage customers, regardless of their size. This new approach results in significant reductions in the DFC for high voltage customers with loads up to 10,000 kW (IIEC Ex.1.0, page 8), and an enormous increase of 160 percent for high voltage customers with loads in excess of 10,000 kW (DOE Ex.1.0, page 4. lines 67-73).

These new non-residential class definitions were used to determine class cost responsibilities in the Company’s embedded cost of service study (ECOSS), provided as ComEd Exhibit 11.1. Interestingly, the High Voltage Class, defined as 69 kV and above, actually includes loads that are served at voltages less than 69kV. Apparently, what the Company has done for purposes of determining the costs to be allocated to this class, is to include the loads of some customers that are served at lower voltages as long as those customers have some load served at 69 kV or above. Then, since there are some loads served at distribution voltages in this “high voltage” class, costs associated with three categories of distribution facilities are allocated to this High Voltage class: “(1) High Voltage Distribution Substations; (2) Distribution Substations: and (3) Distribution Lines.” (DOE Ex.1.0, pages 12-13, lines 308-309.) Dr. Dale Swan testified that this procedure results in more than 25 percent of the facilities costs allocated to the High Voltage class accounted for by “...facilities that virtually provide service only at delivery points served below 69 kV. And yet, under ComEd’s proposal,

customers at or above 69 kV would end up paying for these.” (DOE Ex. 1.0, page 14, lines 343-345.)

Under the Company’s approach the melded cost of \$2.17 per kW-month would be used to set a DFC for all of these loads, served at both high and low voltages. This approach embodies an obvious cross-subsidy from those customers that have only high voltage loads to those that have low voltage loads as well. To correct this error, Dr. Swan recalculated separately, using the Company’s ECOSS, the average cost per kW for those loads at or above 69 kV (\$1.72) and for those loads below 69 kV (\$6.11), and determined that the cross-subsidy from combining the rate for both low and high voltage loads amounted to approximately \$ 4 million. (DOE Ex. 1.0, page 11, line 278. See also DOE Ex. 1.3.)

DOE recommends that, if the Commission determines that average embedded costs should be mechanistically translated into rates, a procedure that DOE takes strong issue with, then the Commission should, at the very least, use the High Voltage Class modification to the Company’s ECOSS proposed by Dr Swan. (DOE Ex. 1.0, page 16, lines 391-394.) The implication for rates would be either to have two classes of High Voltage loads, or to place low voltage loads included by the Company in the High Voltage Class in the appropriate standard voltage category, and bill those loads based on those standard voltage rates. That is essentially what happens under the current system of providing a high voltage credit to the standard voltage rate on *that portion of the demand* that qualifies for the high voltage discount because it is served at 69 kV or above. The Company has raised billing complication objections to this

approach, which DOE finds without merit, as we shall discuss below in the section on rate design.

III.G. **Revenue Allocation**

ComEd has proposed to allocate the jurisdictional delivery services revenue requirement among the various classes of customers based on a mechanistic translation of class embedded cost responsibilities into rates. This proposed mechanistic translation of costs into rates, along with its proposed redefinition of non-residential rate classes, results in widely varying rate impacts among non-residential customers. Mr. Paul Crumrine testified that the overall non-residential rate increase at the Company's proposed total revenue requirement is approximately 25 percent. (ComEd Ex. 9.0 Corrected, page 44, line 952.) That is close to the increase that would be experienced by standard voltage non-residential customers with loads up to 10,000 kW. (IIEC Ex. 1.0, page 7.) However, as Mr. Stephens has testified, standard voltage customers with loads in excess of 10,000 kW would experience an increase of 133 percent under the Company's proposal. The disparities in percentage increases are even more excessive for high voltage customers. As Mr. Stephens shows at IIEC Ex.1.0, page 8, the Company proposes reductions of between 31 percent and 35 percent for high voltage customers with loads up to 10,000 kW, while the change for high voltage customers with loads in excess of 10,000 kW is approximately an increase of 160 percent, as demonstrated by Dr. Swan at DOE Ex.1.0 page 4, lines 67-73. In fact, the percentage increases are even higher than this for these largest customers because of the Company's proposed change in the definition of billing demands. For

example, the 160 percent increase is a simple comparison between the current unit billing rate and the proposed unit billing rate for the largest high voltage customers. However, the Company also proposes to change the billing demand definition from maximum kilowatt demand during peak hours to the maximum kilowatt demand during all 24 hours, which means there will be more billing demands by which to multiply this higher unit rate.

There are a number of interveners that challenge the appropriateness of the reclassification of non-residential customers proposed by the Company. (IIEC, Ex.1.0, page 3; BOMA Ex. 1.0, pages 13-14.) While there is much merit in that position, DOE would urge the Commission that, if it accepts all or much of ComEd's proposed reclassification, it apply some reasoned judgment in determining the revenue responsibilities of these classes, and especially the classes of customers with loads above 10,000 kW. The delivery service revenues of these classes are predominantly made up of the revenues from the Distribution Facilities Charge. An increase in these revenues in excess of 133 percent for standard voltage customers above 10 MW, and 160 percent for high voltage customers above 10 MW, is excessive and amounts to rate shock under any reasonable definition. While not one of Professor Bonbright's primary rate design criteria, he does include rate stability prominently in his list;¹ and most Commissions and rate design experts readily admit that it must be accounted for when designing rates and setting class revenue responsibilities.

¹James C. Bonbright, Principles of Public Utility Rates (New York: Columbia University Press, 1961), p. 291.

Even ComEd's own witnesses testified to the importance of rate stability considerations in determining class revenue responsibilities. Dr. John Landon states at ComEd Ex. 15.0, page 3, beginning at line 63:

“Ratemaking principles include the principle that prices should reflect costs but also incorporate additional considerations, such as price stability and predictability. When costs change and substantial and disproportionate rate changes therefore become necessary, it may be appropriate for rates to be adjusted to reflect new cost levels over a period of time.”

Mr. Crumrine also testified to the appropriateness of mitigating revenue allocations to meet rate stability concerns: “Under certain unique circumstances, generally to avoid large rate shock, this Commission has used other criteria, most often the judgment of the analyst, to allocate costs among customer classes.” As Dr. Swan testified:

“The proposed increases to these customers of 133 percent and 160 percent constitute the kind of ‘rate shock’ that Mr. Crumrine referred to in his testimony and the ‘substantial and disproportionate rate changes’ referred to by Dr. Landon. In my 30 years of participating in electric utility rate cases I do not recall a proposal to increase a major rate (generating most of the revenue from the class) by as large a percentage as is being proposed for the distribution facilities charges for non-residential customers with loads in excess of 10,000 kW.” (DOE Ex. 1.0, page 10, beginning on line 242)

Mr. Crumrine answers these criticisms in two opposing ways in his surrebuttal testimony (ComEd Ex. 40.0). First, on behalf of the Company, he offers a mitigation plan for standard voltage customers with loads in excess of 10,000 kW. Specifically he offers a two-step phase-in for these customers by retaining the class of over 10,000 kW customers and moving their increase 50 percent of the way from the current rate to the Company's initially proposed "cost-based" rate, or \$3.86/kW instead of \$5.38/kW, an increase of 65 percent rather than 130 percent. (ComEd Ex..40.0, pages 7 -8, lines 146-152) Importantly, the Company's mitigation proposal is contingent on the Commission's approval of the Company's 24-hour MKD proposal. During his cross-examination, Mr. Crumrine agreed that one of the reasons for proposing the phase-in plan was rate continuity. (Tr. 2294, line 19 - 2295, line 3.)

On the other hand he dismisses the need to extend the proposed phase-in offer to high voltage customers with loads in excess of 10,000 kW. When asked if it makes sense to provide relief to standard voltage customers facing a 130 percent increase but not to high voltage customers facing a 160 percent increase, Mr. Crumrine waves his hands and says, "It is a complex question because the high voltage class itself includes customers of many different demand levels." (Tr. 2298, lines 8-10.) This, of course, makes no sense. The standard voltage class was proposed to cover customers from 1,000 kW to over 10,000 kW, just as is the High Voltage Class. Mr. Crumrine apparently thinks it is appropriate to split off the over 10,000 kW standard voltage customers into a separate class in order to provide them with some rate mitigation, but not so for the high voltage customers over 10,000 kW.

He also offers another weak explanation – that the High Voltage Class would only be paying around half a cent per kWh for delivery service, as compared to about 3.5 cents for the residential class. (ComEd Ex. 40, page 33, lines 743-753; page 37, lines 826-828; Tr. 2298:17-21.) Presumably, in Mr. Crumrine’s mind, this lower cost per kWh negates the need to provide any kind of rate shock mitigation for these customers, although he never shares that causal nexus with us. Of course, the comparison has absolutely no value. High voltage customers use almost none of the distribution system and so should not be allocated any of those low voltage costs. Further, these costs are allocated on measures of demand, and customers with loads in excess of 10,000 kW generally have very high load factors. Both of these characteristics would mandate that high voltage customers with loads in excess of 10,000 kW pay very much lower rates per kWh for delivery service than does the average residential customer.

What makes the Company’s mechanistic revenue allocation proposal especially troubling is that the Company is prepared to impose huge rate shocks on certain customer classes from this mechanistic translation of embedded costs to rates, when it does not subscribe to the correctness of using embedded costs to begin with. This was demonstrated clearly by Dr. Swan in his rebuttal testimony. (DOE Ex. 1.0. pages 6-8.) He points out that, in the last case, No. 01-0423, Ms. Arlene Jurasek, then Vice President, Regulatory and Strategic Services for ComEd stated that:

“In general, this means that rate designs should be based upon marginal cost principles, or at a minimum where other compelling factors are present should not deviate far or long from marginal cost principles.” (ComEd Ex. 1.0. lines 393-395.)

And, after she indicated the Company's willingness to accept the use of embedded costs in that case, she went on to say:

"I emphasize that this is not an acceptance of embedded cost rate design. Embedded cost ratemaking in principle is a deeply flawed approach, and ComEd expressly reserves the right to contest the use of this methodology in this case and in future cases"

(*Id* at lines 427-430)

It is critically important to note that the Company has not changed its view about the use of embedded costs in this case. At page 43, lines 931 through 936 of his Corrected Direct Testimony (ComEd Ex. 9.0 Corrected), Mr. Crumrine testifies that:

"...while ComEd continues to support marginal cost principles for the pricing of electric delivery services, in the interest of narrowing the issues in this already complex case, ComEd is proposing the use of an embedded cost study for both interclass revenue allocation and rate design purposes. However, ComEd reserves the right to propose the use of a marginal cost study in future proceedings."

Dr. Swan has testified that Ms. Jurasek's statements in the last case and Mr. Crumrine's statement in this case raise great uncertainty regarding which costing approach the Company will recommend in the next case. He points out that, if the Company were to recommend the renewed use of marginal costs instead of the "deeply flawed approach" of embedded costs, and if the Commission were to accept marginal costs once again because the transition period is completed, "that could mean significant reductions in the distribution facilities charges for these largest customers

after these extremely large increases.” (DOE Ex.1.0, page 9, lines211-213.) He also states that, “it makes little sense in my view to urge, as Mr. Crumrine does, the mechanistic conversion of unit embedded costs to rates with no regard to issues of rate stability and continuity.” (DOE Ex.1.0, page 8, lines199-201.)

In his surrebuttal testimony, Mr. Crumrine responds to this concern of Dr. Swan by stating that, “This concern is not without merit (emphasis added).” (ComEd Ex. 40 page 36: lines 801-802.) However, on that same page he goes on to state that, “...the Commission has used the embedded cost study for rate design in the previous two DST cases.” (*Id* at 802-803), and “At this time, it seems unlikely, that the Commission will change its policies in the near future. The Commission cannot make decisions in this case based on uncertain outcomes of future cases.” (*Id.* at 806-808)

We agree, in part, with Mr. Crumrine. The Commission cannot ignore the embedded cost study just because there is some relatively high probability that marginal costs may be used again in the future, as long as the Commission believes there is merit in this case for the use of embedded costs. However, recognizing the use of embedded costs as a guide to revenue allocation is a far cry from the slavish, mechanical translation of embedded costs into class revenue responsibilities, without any regard to rate continuity concerns. That is the path urged by the Company, even though it is on record in this and the previous case as not supporting the use of embedded costs, which it characterized as a “deeply flawed approach.”

In view of the enormous rate shocks for customers with loads in excess of 10,000 kW that will result from a mechanical translation of the Company’s estimated embedded costs into distribution facilities charges, DOE urges that the Commission determine the

revenue responsibilities of these customers following Dr. Swan's general recommendation (DOE Ex.1.0; pages 10-11, lines 252-269). Specifically, DOE urges the Commission to retain two classes of customers with loads in excess of 10,000 kW – one with standard service voltages and the other with service at 69 kV and higher. The distribution facilities charges for these customers should be set by increasing or decreasing the June 2006 rate under the current design in proportion to ComEd's overall revenue increase for non-residential customers that is determined by the Commission in this case. Following Dr. Swan's recommendation, DOE further recommends that, "if, for some reason, the Commission believes that it must make some greater progress toward rates equal to the embedded unit cost provided in the Company's ECROSS, then it might consider adding 5 percentage points" to the increase that would result from this approach. (DOE Ex.1.0; pages 10-11, lines 259-262.) Also in concert with Dr. Swan's recommendation, DOE recommends that the appropriate base to adjust for high voltage customers is the \$0.8347 per kW-month, which accounts for both HVDS and the Rider 8 credits that would be eliminated under the Company's proposal.

At the very least, the Commission should accept Mr. Crumrine's mitigation proposal to move half way toward embedded costs in this case for customers with loads in excess of 10,000 kW, although DOE believes the resulting rate increases would still constitute rate shock. However, there is no basis to exclude high voltage customers from this mitigation relief as Mr. Crumrine proposes. Thus, if the Commission adopts this proposal the same relief should be extended to high voltage customers. Further, DOE would urge that this relief be provided whether or not billing demands are based

on the highest demand over the 24 hours; and DOE would urge the Commission to make the 2-step process a function of the actual cost of service increase that is awarded by the Commission in this case, rather than divorcing the first step increase from the amount of the total cost of service award.

III.H.1.b)(3) Design of High Voltage Class Rates

The Company's mechanistic translation of embedded unit costs into distribution facilities charges leads to widely varying impacts among the size groupings of high voltage customers. Its proposals also lead to the peculiar result of extending high voltage discounts to low voltage loads. Turning to the first issue, the Company's mechanistic application leads to significant reductions in rates for high voltage customers with loads up to 10,000 kW (IIEC Ex.1.0; page 8), but an enormous increase of 160 percent for high voltage customers with loads exceeding 10,000 kW (DOE Ex. 1.0;page 4, line 69). As we mentioned above, the actual increase for the largest customers is even higher because of the proposed change in the definition of billing demands. For the reasons set forth in the above section on Revenue Allocation, DOE strongly recommends that the Commission adopt some form of rate continuity adjustment in the determination of the DFCs for these largest high voltage customers.

As we mentioned earlier, DOE believes a reasonable approach to setting the DFCs for high voltage customers with demands in excess of 10,000 kW would be to separate this group of the largest high voltage customers into a separate customer class, and to apply the average increase for non-residential customers to the net DFC that these customers will pay effective with the June 2006 HVDS discount. To that

percentage increase could be added 5 percentage points if the Commission wished this group's charges to move closer to the Company's estimated embedded unit cost. Thus, the percentage increase, with or without the incremental percentage adder, would be applied to the \$0.8347/kW-month that these customers would pay effective June 2006, after application of the credits in Rider HVDS and Rider 8, both of which would be eliminated under the Company's proposal.

If, instead, the Commission were to adopt Mr. Crumrine's 2-step phase-in mitigation proposal for standard customers above 10,000 kW, under which the DFC would be moved half-way toward the Company's estimated unit cost for that group, DOE strongly urges the Commission to extend that treatment to customers above 10,000 kW that are served at high voltages. As we demonstrated above, there is no reason to discriminate against the largest high voltage customers as Mr. Crumrine's proposal would do. It is no more difficult to separate the above 10,000 kW high voltage customers from other high voltage customers than it is to separate the over 10,000 kW standard voltage customers from the other standard voltage customers. Further, if the Commission were to adopt this phase-in approach, DOE strongly urges that it be decoupled from the Company's proposal to redefine billing demands to be based on the highest demand over the 24 hours, and to base the 50 percent movement toward cost-based rates on the actual total jurisdictional costs that are allowed in this proceeding.

If the Commission insists on applying a mechanistic translation of unit embedded costs to determine distribution facilities charges, as ComEd has proposed, DOE urges the Commission to utilize the calculation of those embedded unit costs that are provided in Dr. Swan's testimony. (DOE Ex.1.3) As we discussed above in the section on the

embedded cost of service study, low voltage loads should not be included in the High Voltage class. There is no basis for extending the benefits of a high voltage discount to loads that are served at lower voltages. Those lower charges should be reserved for loads served at or above 69 kV, just as they are under the current HVDS Rider.

Mr. Crumrine raises billing complications in his surrebuttal testimony in response to this proposal by Dr. Swan. He states that low voltage loads are included in this class because some customers served at high voltages also take some load at low voltages. Thus, the \$4 million intra-class subsidy that Dr. Swan identifies “is often on the bill of the same customer”. (ComEd Exh. 40; 37:823-824.) Mr. Crumrine then makes the leap that to exclude these low voltage loads from the class would “unnecessarily complicate billing and contravene the objective of simplifying rates.” (ComEd Exh. 40; 36: 816-817.)

None of Mr. Crumrine’s arguments hold up to close examination. While it is true that some customers that receive service at both low and high voltages would be both receiving and paying a subsidy, that does not describe all customers, nor does it make the billing correct. Customers with no low voltage loads would be receiving no benefits, and customers with disproportionately large low voltage loads would be receiving a disproportionate benefit. Moreover the amounts are not trivial. Argonne National Laboratory has a high voltage billing demand (under the current definition) of around 55,000 kW.(DOE Ex. 1.0; page 3, line 43.) Dr. Swan calculated the amount of the subsidy at approximately \$0.45/kW-month based on the Company’s ECOS. (DOE Ex. 1.3) That represents an annual cost increase for Argonne National Laboratory of approximately \$300,000.

Mr. Crumrine's billing complications argument is also specious. The Company currently meters both the high voltage and low voltage delivery points for these customers. Thus, the Company has the necessary data to bill these loads separately. Mr. Crumrine agreed with this fact during his cross examination. (Tr. 2301:4-8.) Further, during his cross, Mr. Crumrine accepted that the two DOE laboratories, Argonne and Fermi National Laboratories, have both high voltage and low voltage loads that are currently billed at separate rates. (Tr. 2302:2-13 and Tr. 2303:2-9.) He was finally asked: "Would you agree that ComEd does currently bill some of its high-voltage customers separately for loads served at lower voltages in that high-voltage class?" And, Mr. Crumrine answered, "Yes." (Tr. 2303: 11-15.)

The point is that the Company currently bills low voltage service at rates different from high voltage service for the same customer, or discounts are only applied to the qualifying high voltage loads. Mr. Crumrine is actually proposing to change the current billing arrangement by aggregating these loads so as to make billing easier for the Company. So, the Company has no particular concern in this instance with whether rates accurately reflect the costs of service. DOE believes that low voltage loads should be pulled out of the high voltage class and included in the appropriate standard voltage class. These loads should then be billed separately at the appropriate standard voltage rate. In fact, this approach makes sense even if either the DOE recommended mitigation approach or Mr. Crumrine's 2-step phase-in mitigation approach is adopted by the Commission. If the Commission were to agree and also adopt Mr. Crumrine's phase-in proposal extended to high voltage customers, then the cost based rate toward

which to move half way in this case should be \$1.72/kW-month instead of \$2.17/kW month.

Conclusion.

Wherefore, for the foregoing reasons, DOE respectfully requests (1) that in view of the enormous rate shock facing customers with loads in excess of 10,000kW that will result from a mechanical translation of ComEd's estimated embedded costs into the company's proposed distribution facilities charges, the Commission should determine the revenue responsibilities of these customers based on the general recommendation of DOE witness Swan, or (2) that ComEd's two-step phase-in mitigation proposal to move half way toward embedded costs in this case for standard voltage customers with loads in excess of 10,000 kw facing a 130 percent increase be extended to high voltage customers with loads in excess of 10,000kW facing a 160 percent increase, and (3) that low voltage loads should be separated out of the high voltage class and billed separately at the appropriate standard voltage rate.

Respectfully submitted,

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